

**Notice of Allowability**

Application No.

09/965,881

Applicant(s)

SCHULZ ET AL.

Examiner

Ramnandan Singh

Art Unit

2614

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Apr 10, 2006.
2. ☒ The allowed claim(s) is/are 1,2 and 4.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>Apr. 10, 2006</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                    | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### DETAILED ACTION

1. This action is in response to applicant's response filed on Apr 10, 2006. **Claims 1-2, 4** are pending in the present application.

### REASONS FOR ALLOWANCE

2. Examiner's Statement of Reasons for Allowance:

This invention relates to a method for calculating noise level in a signal. Claim 1 identifies the uniquely distinct feature of the method comprising the steps of: accumulating two sample windows of the signal; calculating energy of the signal within each of the sample windows; calculating the difference in the energy of the signal within each of the sample windows; updating a variance parameter based on the difference; in the event that the variance parameter is less than a predetermined multiple of the energy of the signal within a most recent one of the sample windows then indicating the presence of noise and setting a noise level parameter as a function of the energy of the signal within the most recent one of the sample windows, and in the event that the variance parameter is greater than or equal to than the predetermined multiple of the energy of the signal within the most recent one of the sample windows then indicating the absence of noise in the most recent sample window; and in the event that the noise level parameter exceeds the energy of the signal within the most recent one of the sample windows then setting the noise level parameter to equal the energy of the signal within the most recent one of the sample windows, wherein the step of updating the

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variance parameter further comprises the steps of: comparing the variance parameter to the difference in the energy of the signal within each of the sample windows and setting the variance parameter to the weighted average of the difference and a previous value of the variance parameter; and in the event that the variance parameter is greater than the difference then adjusting the variance parameter with a predetermined decay ratio, and in the event that the variance parameter is less than or equal to the difference then adjusting said variance parameter with a predetermined attack ratio. As such, claim 1 requires adjusting the variance parameter with a predetermined decay ratio in the event that the variance parameter is greater than the difference in the energy of the signal within each of the sample windows, and adjusting the variance parameter with a predetermined attack ratio in the event that the variance parameter is less than or equal to the difference. In this context, the applicant's argument is persuasive. While the closest prior art, Graumann [US 6,175,634 B1] and Reaves et al [WO 9602911 A1] each teach updating a variance parameter, Graumann using an error\_update\_weight, and Reaves et al using a neural network; neither Graumann nor Reaves et al teach or suggest adjusting the variance parameter with a predetermined decay ratio in the event that the variance parameter is greater than the difference in the energy of the signal within each of the sample windows, and adjusting the variance parameter with a predetermined attack ratio in the event that the variance parameter is less than or equal to the difference. As such, the prior art, either singularly or in combination, fail to anticipate or render the above limitation obvious. Therefore, claim 1 is allowable.

Claims 2 and 4 are allowable due to dependence from claim 1.

3. The claims have been re-numbered as follows:

CLAIMS NUMBER (ORIGINAL)	CLAIMS NUMBER (FINAL)
1-2	1-2
4	3

Claim no. 1 along with figure number 1 will be published in the Official Gazette.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Allowance".

### ***Conclusion***


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramnandan Singh whose telephone number is (571) 272-7529. The examiner can normally be reached on M-TH (8:00-5:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ramnandan Singh  
Examiner  
Art Unit 2614



FAN TSANG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600